

DOES ESG PERFORMANCE REDUCE FINANCIAL DISTRESS? THE MEDIATING ROLE OF FIRM VALUE

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Abstract

This study examines the effect of ESG performance on financial distress with firm value as a mediating variable among non-financial companies included in the LQ45 Index during the 2021–2025 period. The study employs a quantitative research approach using panel data regression analysis. The sample consists of 16 non-financial companies selected through purposive sampling, resulting in 80 balanced panel observations. ESG performance is measured using ESG scores obtained from Refinitiv Eikon, financial distress is measured using the Ohlson O-Score model, and firm value is proxied by Tobin's Q. The analysis includes the Common Effect Model (CEM) and mediation analysis using the Sobel test. The findings indicate that ESG performance does not significantly affect financial distress or firm value. In addition, firm value is unable to significantly influence financial distress and does not mediate the relationship between ESG performance and financial distress. Meanwhile, firm size negatively affects financial distress, whereas leverage positively affects financial distress. These findings suggest that ESG implementation among LQ45 companies has not yet been fully translated into stronger market valuation and improved financial resilience. This study contributes to the sustainable finance literature by providing empirical evidence regarding the limited role of ESG performance in reducing financial distress in emerging market contexts. The findings also provide practical implications for managers, investors, and policymakers in strengthening the effectiveness of sustainability practices and long-term corporate financial stability.

Keywords: ESG Performance, Financial Distress, Firm Value, Sustainable Finance

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1. Introduction

Environmental, Social, and Governance (ESG) performance has emerged as a critical issue in modern corporate management due to increasing global concern regarding sustainability, environmental responsibility, social welfare, and corporate governance transparency (Linnenluecke, 2022; Mooneapen et al., 2022). Investors, regulators, creditors, and other stakeholders increasingly evaluate companies not only based on financial performance but also on their commitment to sustainable business practices. Consequently, ESG has evolved from a voluntary corporate initiative into a strategic instrument that may influence market perception, corporate reputation, investment decisions, and long-term financial sustainability (Feng et al., 2025; Pondrinal & Luthan, 2026).

The growing importance of ESG is particularly evident in emerging market economies, where market transparency, investor protection, and governance quality are still developing (Abu Afifa et al., 2025). In these environments, ESG disclosures may function as an important mechanism to reduce information asymmetry and strengthen stakeholder confidence. Companies with strong ESG performance are generally perceived as more transparent, accountable, and capable of managing long-term risks. As a result, ESG practices may contribute to improving corporate resilience and reducing the likelihood of financial distress (Agbakwuru et al., 2024; Ridwan & Alghifari, 2025).

Financial distress represents a condition in which a company experiences financial difficulties that may threaten operational continuity and corporate sustainability. This condition often arises when firms fail to manage financial obligations effectively, leading to declining investor confidence, restricted access to financing, and increased bankruptcy risk. In emerging markets such as Indonesia, financial distress risk becomes increasingly relevant due to economic volatility, ownership concentration, and market uncertainty (Maulana et al., 2024). Therefore, identifying factors that may reduce financial distress has become an important issue for both academics and practitioners.

Several previous studies suggest that ESG performance contributes positively to corporate sustainability and risk management. Firms with strong ESG practices are believed to possess better governance quality, stronger stakeholder relationships, and more sustainable operational strategies, which may reduce financial vulnerability (Ridwan & Alghifari, 2025). However,

empirical findings regarding the relationship between ESG and financial distress remain inconclusive. Some studies report that ESG performance reduces corporate risk and financial distress, while others argue that ESG implementation requires substantial investment costs that may increase short-term financial pressure. These inconsistent findings indicate that the relationship between ESG and financial distress may not occur directly but through intermediary mechanisms.

One potential mechanism explaining this relationship is firm value. Firm value reflects market perceptions regarding a company's future growth opportunities, operational quality, and sustainability prospects (Khairredine et al., 2024; Yahaya, n.d.-b). In the perspective of signaling theory, companies with strong ESG performance provide positive signals regarding corporate quality and long-term viability, thereby increasing investor confidence and market valuation. Higher firm value generally indicates stronger market trust, easier access to external financing, and greater financial flexibility, which may reduce the probability of financial distress. Therefore, firm value may play an important mediating role in explaining how ESG performance influences financial distress.

The relevance of ESG practices becomes increasingly important among large publicly listed companies in Indonesia, particularly those operating in environmentally sensitive and consumer-oriented industries (Giannarakis, 2014; Rossi et al., 2021). Companies in manufacturing, consumer goods, pharmaceuticals, agriculture, food processing, and infrastructure sectors face growing pressure from investors, regulators, and society to maintain sustainable business practices while preserving financial stability. In recent years, sustainability issues, environmental responsibility, and governance quality have become increasingly important in shaping market perceptions and corporate competitiveness (Padilla-Lozano & Collazzo, 2022). Consequently, companies are encouraged to strengthen ESG implementation not only to fulfill stakeholder expectations but also to maintain long-term financial resilience.

Despite the growing body of ESG literature, previous studies have predominantly examined the direct effects of ESG performance on firm value, profitability, financial performance, and corporate risk. While several studies have documented the relationship between ESG and financial distress, the empirical evidence remains inconsistent, particularly in emerging market economies. Furthermore, limited attention has been given to understanding the underlying mechanism through which ESG performance may influence financial

distress. In particular, the role of firm value as a mediating variable remains underexplored, despite the possibility that market valuation serves as an important channel linking sustainability performance and financial stability.

This research gap is especially relevant in Indonesia, where ESG adoption has increased significantly in recent years, yet investor responses to sustainability disclosures remain relatively heterogeneous. Companies included in the LQ45 Index represent large and highly visible firms that are expected to demonstrate stronger ESG commitments and financial resilience. However, empirical evidence regarding whether ESG performance enhances firm value and subsequently reduces financial distress among these firms remains limited.

Therefore, this study extends the existing literature by examining the mediating role of firm value in the relationship between ESG performance and financial distress among non-financial LQ45 companies listed on the Indonesia Stock Exchange. Unlike prior studies that primarily focus on direct relationships, this study investigates the indirect transmission mechanism through which ESG performance may affect corporate financial stability. The findings are expected to enrich stakeholder theory and signaling theory while providing evidence from an emerging market setting where ESG practices and investor perceptions continue to evolve.

This study contributes to the literature in three important ways. First, it extends prior ESG research by examining financial distress as the primary outcome variable rather than focusing solely on firm performance or market valuation. Second, it introduces firm value as a mediating mechanism to explain how ESG performance may influence corporate financial stability indirectly. Third, the study provides empirical evidence from the Indonesian capital market, particularly LQ45 non-financial firms, where research examining ESG, firm value, and financial distress simultaneously remains relatively scarce. These contributions offer additional insights into the effectiveness of ESG implementation in enhancing long-term corporate resilience within emerging market environments.

Stakeholder Theory

Stakeholder theory explains that a company is not only responsible to shareholders but also to broader stakeholders, including investors, creditors, customers, employees, regulators, and society (Freeman, 1999). Companies are expected to maintain sustainable business practices that accommodate the

interests of various stakeholders in order to achieve long-term sustainability and legitimacy (Gomez-Trujillo et al., 2024). In the context of ESG, companies with strong environmental, social, and governance performance are considered more capable of fulfilling stakeholder expectations through transparent, ethical, and responsible business practices (Agbakwuru et al., 2024; Chouaibi & Affes, 2021). As a result, strong ESG performance may increase stakeholder trust and strengthen the company's market perception. From the stakeholder theory perspective, companies that successfully implement ESG practices tend to obtain stronger support from stakeholders, which may positively influence firm value. Investors generally perceive companies with high ESG performance as having better risk management, stronger governance quality, and greater long-term sustainability prospects. Consequently, higher stakeholder confidence may increase market valuation and improve firm value. Furthermore, companies with stronger firm value are considered to possess greater financial flexibility and better access to external financing, which may reduce the probability of financial distress.

ESG Performance on Financial Distress

ESG performance reflects a company's commitment to environmental responsibility, social sustainability, and good corporate governance practices (Mooneepen et al., 2022; D. P. D. Nugroho et al., 2024). Companies with strong ESG performance are generally perceived as more transparent, accountable, and capable of managing long-term business risks. In stakeholder theory, ESG practices strengthen relationships between companies and stakeholders, thereby improving corporate legitimacy and reducing uncertainty regarding future business sustainability (Moussa & Elmarzouky, 2024; N. Wang et al., 2024). Strong ESG implementation may reduce the likelihood of financial distress because companies with good sustainability practices tend to have better operational stability, stronger investor confidence, and easier access to capital markets. In addition, ESG performance may reduce reputational risk and enhance corporate resilience during economic uncertainty. This argument is consistent with previous studies stating that ESG performance negatively affects financial distress because sustainable companies are considered more capable of maintaining long-term financial stability (D. P. D. Nugroho et al., 2024; Pondrinal & Luthan, 2026; Rossi et al., 2021; Wu et al., 2022).

H1: ESG performance has a negative effect on financial distress.

ESG Performance on Firm Value

Firm value reflects market perceptions regarding the company's future growth opportunities, operational quality, and overall corporate prospects (Adamu & Hamidah, 2023; Hermawan et al., n.d.). In signaling theory, ESG performance serves as a positive signal regarding corporate sustainability and managerial quality. Companies with strong ESG performance provide information to investors that they possess better governance systems, lower business risk, and stronger long-term sustainability potential (N. Wang et al., 2024). Investors tend to respond positively to firms with high ESG performance because these companies are considered more resilient and capable of creating sustainable value. Consequently, positive market perceptions may increase investor confidence and improve firm value. Previous studies also indicate that companies with better ESG performance tend to achieve higher market valuation (Anggreni Das et al., 2025; Khaireddine et al., 2024; Wu et al., 2022; Yahaya, n.d.-b).

H2: ESG performance has a positive effect on firm value.

Firm Value on Financial Distress

Firm value represents the level of market confidence toward a company's future prospects and financial sustainability (Khaireddine et al., 2024; Yahaya, n.d.-a). Companies with high firm value are generally considered financially healthy, capable of generating future growth, and able to maintain investor trust. From the signaling theory perspective, higher firm value indicates positive market assessments regarding corporate quality and financial stability. Companies with stronger firm value usually possess easier access to financing, lower capital constraints, and greater financial flexibility, thereby reducing the possibility of experiencing financial distress. Conversely, declining firm value may signal worsening company performance and increase the probability of financial difficulties (Isayas, 2021). This argument is supported by previous studies suggesting that firm value negatively influences financial distress (Adamu & Hamidah, 2023; Almubarak et al., 2023; Isayas, 2021; Yahaya, n.d.-b).

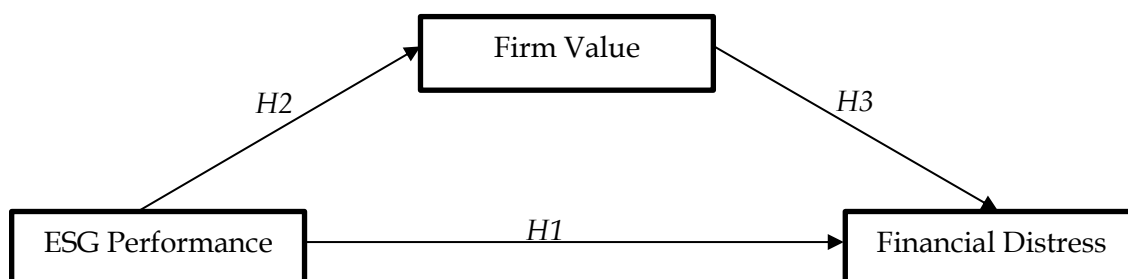
H3: Firm value has a negative effect on financial distress.

ESG Performance on Financial Distress through Firm Value as a Mediating Variable

Stakeholder theory and signaling theory explain that ESG performance may influence financial distress indirectly through firm value. Strong ESG performance creates positive perceptions among investors and stakeholders regarding corporate sustainability, governance quality, and long-term business prospects (Koh et al., 2022). These positive signals may improve market confidence and increase firm value. Higher firm value indicates stronger market trust and better financial flexibility, which may help companies reduce the risk of financial distress. In other words, ESG implementation may strengthen corporate financial stability by improving market valuation first before influencing financial distress conditions (C. Wang, 2024). Therefore, firm value may function as an important mediating variable in explaining the relationship between ESG performance and financial distress (Koh et al., 2022; C. Wang, 2024; Yahaya, n.d.-a).

H4: ESG performance has a negative effect on financial distress through firm value as a mediating variable.

Figure 1. Research Model



Note: H4 represents the mediating effect of firm value on the relationship between ESG performance and financial distress.

Source: secondary data (2026)

2. Research Method

This study employs a quantitative research approach using panel data regression analysis to examine the relationship between ESG performance, firm value, and financial distress. The study investigates whether firm value mediates the effect of ESG performance on financial distress among companies included in the LQ45 Index in Indonesia. Panel data analysis is considered appropriate

because it combines cross-sectional and time-series data, enabling more comprehensive analysis and improving estimation accuracy.

The population of this study consists of companies included in the LQ45 Index listed on the Indonesia Stock Exchange (IDX). The sample was selected using purposive sampling based on several criteria. First, companies must be consistently included in the LQ45 Index during the observation period. Second, companies must publish complete annual reports and sustainability reports during the research period. Third, companies must have complete data related to ESG performance, firm value, financial distress, and control variables. Fourth, companies operating in the financial sector are excluded because they possess different regulatory frameworks and financial reporting characteristics compared to non-financial firms.

Based on these criteria, the final sample consists of non-financial companies included in the LQ45 Index operating in various sectors, including manufacturing, consumer goods, pharmaceuticals, agriculture, food processing, infrastructure, and industrial sectors. The observation period covers the years 2021–2025. The study utilizes secondary data obtained from annual reports, sustainability reports, financial statements, and the Refinitiv Eikon database. Additional supporting data were collected from the Indonesia Stock Exchange (IDX) website and related company publications.

The dependent variable in this study is financial distress. Financial distress is measured using the Ohlson O-Score model. The Ohlson O-Score was selected because it employs a probabilistic approach and incorporates multiple accounting-based indicators that comprehensively capture a firm's financial condition. Compared with alternative models such as the Altman Z-Score, Springate, and Zmijewski models, the Ohlson O-Score is considered more flexible for application across various non-financial industries because it does not rely heavily on market value measures and manufacturing-specific characteristics. In addition, previous studies have demonstrated that the Ohlson O-Score provides reliable predictions of corporate financial distress and bankruptcy risk in both developed and emerging market contexts (D. S. Nugroho & Dewayanto, 2025; Rahman et al., 2021; Sánchez-Almeyda, n.d.). Given that this study examines non-financial companies from various sectors included in the LQ45 Index, the Ohlson O-Score is considered more appropriate for capturing differences in financial vulnerability across firms.

This study also includes several control variables to improve the robustness of the model. Firm size is measured using the natural logarithm of total assets. Leverage is measured using the Debt to Asset Ratio (DAR). These control variables are included because previous studies indicate that firm size, leverage may influence both firm value and financial distress.

The operational definitions and measurements of variables are presented in Table 1.

Table 1. Operational Definition of Variables

Variable	Definition	Measurement
Financial Distress	A condition indicating the probability of financial difficulties experienced by the company	Ohlson O-Score
ESG Performance	Corporate performance related to environmental, social, and governance practices	ESG Score from Refinitiv Eikon
Firm Value	Market perception regarding corporate value and future growth opportunities	Tobin's Q
Firm Size	Company size reflecting total corporate resources	Ln Total Assets
Leverage	The proportion of company assets financed by debt	Debt to Asset Ratio (DAR)

Source: Data Processed (2026)

To examine the mediating effect, this study applies panel data regression analysis using three regression models. Before conducting regression analysis, model selection tests consisting of the Chow test, Hausman test, and Lagrange Multiplier (LM) test are performed to determine the most appropriate panel data estimation model, namely the Common Effect Model (CEM), Fixed Effect Model (FEM), or Random Effect Model (REM).

The regression equations used in this study are as follows:

Model 1

$$FD_{it} = \alpha + \beta_1 ESG_{it} + \beta_2 SIZE_{it} + \beta_3 DAR_{it} + \varepsilon_{it}$$

Model 2

$$FV_{it} = \alpha + \beta_1 ESG_{it} + \beta_2 SIZE_{it} + \beta_3 DAR_{it} + \varepsilon_{it}$$

Model 3

$$FD_{it} = \alpha + \beta_1 FV_{it} + \beta_2 SIZE_{it} + \beta_3 DAR_{it} + \varepsilon_{it}$$

Furthermore, mediation analysis is conducted using the Sobel test to evaluate whether firm value significantly mediates the relationship between ESG performance and financial distress. Statistical analysis in this study is performed using EViews software with a significance level of 5%.

3. Result and Discussion

Descriptive Statistics

Table 2 presents the descriptive statistics of the variables used in this study. Firm value (FV), measured by Tobin's Q, has a mean value of 2.27 with a standard deviation of 2.10, indicating substantial variation in market valuation among the sampled firms. The minimum Tobin's Q value of 0.37 reflects relatively low market valuation, while the maximum value of 9.86 indicates strong investor confidence in certain companies. ESG performance (ESG) has an average score of 50.75, suggesting moderate sustainability performance among firms, with values ranging from 0.10 to 82.24. Financial distress (FD) has a mean value of -11.35, indicating that most companies are relatively far from severe financial distress conditions. Firm size (SIZE) shows relatively low variation, with a mean value of 31.44, indicating that the sample primarily consists of large publicly listed companies. Meanwhile, leverage (DAR) has an average value of 48.81, suggesting that nearly half of corporate assets are financed through debt, with considerable variation across firms.

Table 2. Descriptive Statistics

Statistik	FD	ESG	FV	SIZE	DAR
Mean	-11.34533	50.75338	2.271656	31.43879	48.80858
Maximum	2.221525	82.24000	9.858494	33.86025	86.60575
Minimum	-13.78799	0.100000	0.372624	28.93444	11.46779
Std. Dev.	2.032542	22.76710	2.102299	1.205264	20.36549
Observations	80	80	80	80	80

Source: Eviews12, processed, (2026)

Chow Test

Table 3. Chow Test Result

Effects Test	Statistic	d.f.	Prob.
Cross-section F	0.794517	(15,60)	0.6786
Cross-section Chi-square	14.494282	15	0.4884

Source: Eviews12, processed, (2026)

The Chow test results presented in Table 3 show that the Cross-section F probability value is 0.6786 and the Cross-section Chi-square probability value is 0.4884. Both probability values are greater than the 5% significance level ($\alpha = 0.05$), indicating that the null hypothesis cannot be rejected. Therefore, the Common Effect Model (CEM) is considered more appropriate than the Fixed Effect Model (FEM) for this study. These results suggest that there are no significant individual effects across companies in the panel data model.

Hausman Test

Table 4. Hausman Test Result

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section Random	3.915853	4	0.4175

Source: Eviews12, processed, (2026)

The Hausman test results presented in Table 4 show a probability value of 0.4175, which is greater than the 5% significance level ($\alpha = 0.05$). This indicates that the null hypothesis cannot be rejected, meaning that the Random Effect Model (REM) is more appropriate than the Fixed Effect Model (FEM). Therefore, the panel data regression analysis in this study uses the Random Effect Model (REM).

Lagrange Multiplier (LM) Test

Table 5. Lagrange Multiplier (LM) Test Result

Method	Cross-section	Time	Both
Breusch-Pagan Statistic	1.723771	0.244381	1.968152
Prob.	0.1892	0.6211	0.1606

Source: Eviews12, processed, (2026)

The Lagrange Multiplier (LM) test results presented in Table 5 show that the Breusch-Pagan probability values for the cross-section, time, and both effects are 0.1892, 0.6211, and 0.1606, respectively. All probability values are greater than the 5% significance level ($\alpha = 0.05$), indicating that the null hypothesis cannot be rejected. Therefore, the Common Effect Model (CEM) is considered more appropriate than the Random Effect Model (REM). These findings indicate that there are no significant random effects in the panel data model.

Based on the panel data model selection procedure, the Common Effect Model (CEM) was ultimately selected as the most appropriate estimation model for this study. The Chow test results indicated that the Fixed Effect Model (FEM)

was not superior to the Common Effect Model, while the Lagrange Multiplier (LM) test further demonstrated that the Random Effect Model (REM) was not significantly better than the Common Effect Model. Although the Hausman test suggested that the Random Effect Model was preferable to the Fixed Effect Model, the final decision was determined based on the combined results of the Chow and LM tests. Therefore, since neither fixed effects nor random effects were statistically significant, the Common Effect Model (CEM) was considered the most efficient and appropriate model for estimating the relationships among ESG performance, firm value, and financial distress in this study.

Hypothesis testing

H1: ESG performance has a negative effect on financial distress

Table 6 presents the panel data regression results examining the effect of ESG performance on financial distress. The ESG variable shows a coefficient value of 0.006882 with a probability value of 0.4253, indicating that ESG performance does not significantly affect financial distress. This finding suggests that ESG implementation among the sampled companies has not been able to directly reduce financial distress risk during the observation period. Firm size (SIZE) has a coefficient value of -0.403077 with a probability value of 0.0250, indicating a negative and significant effect on financial distress. This result implies that larger companies tend to experience lower financial distress risk because they generally possess stronger financial resources and better access to external financing. Meanwhile, leverage (DAR) shows a coefficient value of 0.063560 with a probability value of 0.0000, indicating a positive and significant effect on financial distress. This finding indicates that companies with higher debt proportions are more likely to experience financial distress due to increasing financial obligations and repayment pressure. This finding is consistent with previous studies reporting that ESG performance does not always significantly influence financial distress, particularly in emerging market contexts where ESG awareness and sustainability integration remain relatively limited (Khalil et al., 2024; Nophet & Sincharoonsak, 2025). Several prior studies also found that ESG disclosure may improve corporate image and stakeholder legitimacy but does not necessarily strengthen financial resilience in the short term. Therefore, the benefits of ESG implementation may require a longer period before being reflected in reduced financial distress risk.

Furthermore, the insignificant effect may reflect the relatively early stage of ESG implementation among Indonesian listed companies. Although ESG disclosure practices have increased in recent years, many firms may still adopt ESG initiatives primarily to comply with regulatory expectations rather than fully integrating sustainability principles into strategic business operations. As a result, ESG activities may improve corporate legitimacy and public image but may not yet generate sufficient operational and financial benefits to reduce financial distress risk. This finding is consistent with stakeholder theory, which suggests that the benefits of stakeholder-oriented initiatives may only materialize over a longer time horizon after stakeholders fully recognize and respond to the firm's sustainability efforts.

Table 6. Panel Data Regression Results for H1: Effect of ESG Performance on Financial Distress

FD	Coef.	Std. Err.	t	P> t
C	-2.124642	5.274662	-0.402802	0.6882
ESG	0.006882	0.008586	0.801604	0.4253
SIZE	-0.403077	0.176255	-2.286895	0.0250
DAR	0.063560	0.010100	6.293178	0.0000

Source: Eviews12, processed, (2026)

H2: ESG performance has a positive effect on firm value

Table 7. Panel Data Regression Results for H2: Effect of ESG Performance on Firm Value

FV	Coef.	Std. Err.	t	P> t
C	13.37111	6.612732	2.022025	0.0467
ESG	0.006995	0.010764	0.649863	0.5177
SIZE	-0.378835	0.220967	-1.714440	0.0905
DAR	0.009335	0.012662	0.737288	0.4632

Source: Eviews12, processed, (2026)

Table 7 presents the panel data regression results examining the effect of ESG performance on firm value. The ESG variable shows a positive coefficient value of 0.006995, indicating a positive relationship between ESG performance and firm value. However, the probability value of 0.5177 indicates that the effect is statistically insignificant. This finding suggests that ESG implementation among the sampled companies has not been able to significantly increase firm value during the observation period. Firm size (SIZE) has a negative coefficient

value of -0.378835 with a probability value of 0.0905, indicating that firm size does not significantly affect firm value at the 5% significance level. Meanwhile, leverage (DAR) shows a positive coefficient value of 0.009335 with a probability value of 0.4632, indicating that leverage also does not significantly influence firm value among the sampled companies. This result differs from several prior studies that found ESG performance positively affects firm value because strong sustainability practices improve corporate reputation, investor confidence, and long-term growth prospects (Aydoğan et al., 2022; Ridwan & Alghifari, 2025; Wu et al., 2022). However, the findings are in line with studies arguing that the impact of ESG on firm value may vary depending on market maturity, investor awareness, regulatory pressure, and the quality of ESG disclosure. In developing markets, ESG information may not yet be fully integrated into investment decision-making processes, thereby limiting its influence on market valuation.

Another possible explanation relates to the characteristics of the Indonesian capital market and the maturity of ESG practices among listed firms. Although ESG disclosure has become increasingly common, investor awareness and utilization of ESG information in investment decisions may still be relatively limited. Many investors in emerging markets continue to prioritize short-term financial performance indicators, such as profitability, earnings growth, and dividend potential, over sustainability-related information. In addition, the quality and consistency of ESG disclosures may vary considerably across firms, making it difficult for investors to accurately assess the economic benefits associated with ESG performance. Consequently, ESG performance may not yet be fully incorporated into market valuations, thereby weakening its influence on firm value.

H3: Firm value has a negative effect on financial distress.

Table 8. Panel Data Regression Results for H3: Effect of Firm Value on Financial Distress.

FD	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.422667	5.331893	-0.454373	0.6509
FV	-0.036506	0.091533	-0.398827	0.6911
SIZE	-0.379892	0.173929	-2.184177	0.0320
DAR	0.063587	0.010158	6.259562	0.0000

Source: Eviews12, processed, 2026

Table 8 presents the panel regression results examining the effect of firm value on financial distress. The firm value (FV) variable has a coefficient value of -0.036506, indicating a negative relationship between firm value and financial distress. This result suggests that companies with higher market valuation tend to experience lower financial distress risk. However, the probability value of 0.6911 indicates that the relationship is statistically insignificant. This finding implies that firm value has not been able to significantly reduce financial distress among the sampled companies during the observation period. One possible explanation is that market valuation in emerging markets may not fully reflect the actual financial condition of firms. Investors may respond more strongly to short-term market sentiment and macroeconomic conditions rather than to the company's long-term financial stability. Consequently, companies with relatively high firm value may still face financial pressure and operational risks. Firm size (SIZE) shows a coefficient value of -0.379892 with a probability value of 0.0320, indicating a negative and significant effect on financial distress. This finding suggests that larger firms tend to have lower financial distress risk because they generally possess greater financial resources, stronger operational diversification, and easier access to funding sources. Meanwhile, leverage (DAR) has a coefficient value of 0.063587 and a probability value of 0.0000, indicating a positive and significant effect on financial distress. This result demonstrates that companies with higher debt levels are more likely to experience financial distress due to increasing financial obligations and repayment pressure. The finding further confirms that leverage remains one of the main determinants of corporate financial vulnerability (Firdaus et al., 2026; Rahman et al., 2021).

Sobel Test

Table 9. Mediation Analysis Using the Sobel Test: Firm Value as Mediating Variable

ESG Performance	Mediating Variable	Financial Distress	Sobel Test	p-value
ESG	Firm Value (Tobin's Q)	FD	-0.33991773	0.73391848

Source: Eviews12, processed, (2026)

Table 9 presents the mediation analysis using the Sobel test to examine the mediating role of firm value in the relationship between ESG performance and financial distress. The Sobel test result shows a test statistic value of -0.33991773 with a probability value of 0.73391848. Since the p-value is greater than the 5% significance level, the mediating effect of firm value is statistically insignificant. This finding indicates that firm value is unable to mediate the relationship

between ESG performance and financial distress among the sampled companies. In other words, ESG performance does not indirectly reduce financial distress through improvements in firm value. One possible explanation is that investors in emerging markets may not fully consider ESG performance as a major determinant of market valuation and long-term financial stability. Consequently, improvements in ESG practices have not yet translated into stronger firm value capable of reducing financial distress risk (Engko, n.d.; Sihotang & Siregar, 2025).

From a signaling theory perspective, firm value is expected to reflect market confidence regarding a company's future prospects and financial strength. However, in emerging markets, stock prices and market valuations may be influenced by speculative trading behavior, macroeconomic conditions, and short-term investor sentiment. Consequently, high firm value does not necessarily indicate strong underlying financial fundamentals capable of reducing financial distress risk. This condition may explain why firm value was unable to significantly predict financial distress among the sampled firms.

4. Conclusion

This study examines the effect of ESG performance on financial distress with firm value as a mediating variable among non-financial companies included in the LQ45 Index during the 2021–2025 period. The findings indicate that ESG performance does not significantly affect financial distress or firm value. In addition, firm value is also unable to significantly influence financial distress. The Sobel test further confirms that firm value does not mediate the relationship between ESG performance and financial distress. These results suggest that ESG practices among the sampled companies have not yet been fully translated into stronger market valuation and improved financial resilience. Meanwhile, firm size has a significant negative effect on financial distress, while leverage positively affects financial distress, indicating that larger firms tend to be financially more stable, whereas firms with higher debt levels face greater financial pressure. This study contributes to the sustainable finance literature by providing empirical evidence that ESG implementation in emerging markets may not immediately influence firm value and financial distress due to differences in investor perception, market maturity, and sustainability awareness.

This study has several limitations. First, the research only focuses on non-financial companies included in the LQ45 Index, which may limit the generalizability of the findings to other sectors and market categories. Second, the study uses a relatively short observation period, which may not fully capture the long-term impact of ESG implementation on corporate financial stability. Third, the study only employs firm value as a mediating variable, while other potential mechanisms such as profitability, corporate reputation, governance quality, or investment efficiency may also explain the relationship between ESG performance and financial distress. Therefore, future research is suggested to expand the sample coverage, extend the observation period, and incorporate additional mediating or moderating variables to provide a broader understanding of the role of ESG in enhancing corporate sustainability and financial resilience.

In addition, the mediation analysis in this study was conducted using the Sobel test. Although the Sobel test is widely used to examine indirect effects, it assumes normality of the sampling distribution of the mediation effect and may be less robust when applied to relatively small samples. Future research is encouraged to employ bootstrapping techniques to obtain more robust and reliable estimates of indirect effects and to validate the mediation relationships more comprehensively.

5. References

- Abu Afifa, M., Nguyen, N. M., & Bui, D. V. (2025). Environmental, social and governance (ESG) disclosure quality in developing countries: Evidence from the ASEAN region. *Corporate Governance: The International Journal of Business in Society*, 25(7), 1728–1754. <https://doi.org/10.1108/CG-02-2024-0102>
- Adamu, I., & Hamidah, H. (2023). Assessing The Impact of Capital Structure on Firm Value: A Quantitative Study of Financial Ratios and Stock Prices of Nigeria Food and Beverage Companies. *The Indonesian Journal of Accounting Research*, 26(03). <https://doi.org/10.33312/ijar.729>
- Agbakwuru, V., , Obinna Barnabas Onyenahazi, & , Bernard Owusu Antwi and Kabir Oyewale. (2024). The Impact of Environmental, Social, and Governance (ESG) Reporting on Corporate Financial Performance. *International Journal of Research Publication and Reviews*, 5(9).

- Almubarak, W. I., Chebbi, K., & Ammer, M. A. (2023). Unveiling the Connection among ESG, Earnings Management, and Financial Distress: Insights from an Emerging Market. *Sustainability*, 15(16), 12348. <https://doi.org/10.3390/su151612348>
- Anggreni Das, N., Lukviarman, N., Rahim, R., & Fany Alfarisi, M. (2025). The effect of two-tier board characteristics on firm value: The mediating role of corporate reputation in Indonesia. *Investment Management and Financial Innovations*, 22(4), 449–461. [https://doi.org/10.21511/imfi.22\(4\).2025.33](https://doi.org/10.21511/imfi.22(4).2025.33)
- Aydoğmuş, M., Gülay, G., & Ergun, K. (2022). Impact of ESG performance on firm value and profitability. *Borsa Istanbul Review*, 22, S119–S127. <https://doi.org/10.1016/j.bir.2022.11.006>
- Chouaibi, S., & Affes, H. (2021). The effect of social and ethical practices on environmental disclosure: Evidence from an international ESG data. *Corporate Governance: The International Journal of Business in Society*, 21(7), 1293–1317. <https://doi.org/10.1108/CG-03-2020-0087>
- Engko, C. (n.d.). *ESG performance and firm value: Green innovation as a mediator variable (evidence from Indonesia)*.
- Feng, L., Leong, C.-M., & Ali, M. (2025). ESG investments, corporate reputation and market value: A comprehensive review and future research agenda. *Management & Sustainability: An Arab Review*. <https://doi.org/10.1108/MSAR-06-2024-0054>
- Firdaus, A., Afiah, N. N., Suharman, H., & Fitrijanti, T. (2026). Corporate Governance Structures and Firm Value: The Mediating Role of Financial Distress in ASEAN Construction Companies. *International Journal of Financial Studies*, 14(1), 24. <https://doi.org/10.3390/ijfs14010024>
- Giannarakis, G. (2014). The determinants influencing the extent of CSR disclosure. *International Journal of Law and Management*, 56(5), 393–416. <https://doi.org/10.1108/IJLMA-05-2013-0021>
- Gomez-Trujillo, A. M., Gonzalez-Perez, M. A., & Baena-Rojas, J. J. (2024). Sustainable strategy as a lever for corporate legitimacy and long-term competitive advantage: An examination of an emerging market multinational. *European Business Review*, 36(1), 112–139. <https://doi.org/10.1108/EBR-01-2023-0003>
- Hermawan, S., Biduri, S., & Maryati, E. (n.d.). *Enterprise risk management, intellectual capital, and investment opportunity set on firm value through financial performance as an intervening variable*.

- Isayas, Y. N. (2021). Financial distress and its determinants: Evidence from insurance companies in Ethiopia. *Cogent Business & Management*, 8(1), 1951110. <https://doi.org/10.1080/23311975.2021.1951110>
- Khaireddine, H., Lacombe, I., & Jarboui, A. (2024). The trilogy in sustainability of environmental performance, assurance quality and firm value. *Sustainability Accounting, Management and Policy Journal*, 15(2), 482–519. <https://doi.org/10.1108/SAMPJ-07-2022-0352>
- Khalil, M. A., Khalil, S., & Sinliamthong, P. (2024). From ratings to resilience: The role and implications of environmental, social, and governance (ESG) performance in corporate solvency. *Sustainable Futures*, 8, 100304. <https://doi.org/10.1016/j.sftr.2024.100304>
- Koh, H.-K., Burnasheva, R., & Suh, Y. G. (2022). Perceived ESG (Environmental, Social, Governance) and Consumers' Responses: The Mediating Role of Brand Credibility, Brand Image, and Perceived Quality. *Sustainability*, 14(8), 4515. <https://doi.org/10.3390/su14084515>
- Linnenluecke, M. K. (2022). Environmental, social and governance (ESG) performance in the context of multinational business research. *Multinational Business Review*, 30(1), 1–16. <https://doi.org/10.1108/MBR-11-2021-0148>
- Maulana, A., Dwita, M., Fitriyani, M., Sunaryo, D., & Adiyanto, Y. (2024). Risk Management As A Determinant Of Indonesian Banking Financial Performance: A Systematic Literature Approach. *Indo-Fintech Intellectuals: Journal of Economics and Business*, 4(5), 2523–2537. <https://doi.org/10.54373/ifijeb.v4i5.2120>
- Mooneeapen, O., Abhayawansa, S., & Mamode Khan, N. (2022). The influence of the country governance environment on corporate environmental, social and governance (ESG) performance. *Sustainability Accounting, Management and Policy Journal*, 13(4), 953–985. <https://doi.org/10.1108/SAMPJ-07-2021-0298>
- Moussa, A. S., & Elmarzouky, M. (2024). Sustainability Reporting and Market Uncertainty: The Moderating Effect of Carbon Disclosure. *Sustainability*, 16(13), 5290. <https://doi.org/10.3390/su16135290>
- Nophet, S., & Sincharoonsak, T. (2025). ESG Integration and Sustainable Value Creation: A Qualitative Study on Corporate Performance, Financial Resilience, and Investor Confidence in Thailand's Capital Market. *Journal of Cultural Analysis and Social Change*, 1–9. <https://doi.org/10.64753/jcasc.v10i3.2372>

- Nugroho, D. P. D., Hsu, Y., Hartauer, C., & Hartauer, A. (2024). Investigating the Interconnection between Environmental, Social, and Governance (ESG), and Corporate Social Responsibility (CSR) Strategies: An Examination of the Influence on Consumer Behavior. *Sustainability*, 16(2), 614. <https://doi.org/10.3390/su16020614>
- Nugroho, D. S., & Dewayanto, T. (2025). Application of statistics and artificial intelligence for corporate financial distress prediction models: A systematic literature review. *Journal of Modelling in Management*, 20(6), 1999–2023. <https://doi.org/10.1108/JM2-12-2024-0412>
- Padilla-Lozano, C. P., & Collazzo, P. (2022). Corporate social responsibility, green innovation and competitiveness – causality in manufacturing. *Competitiveness Review: An International Business Journal*, 32(7), 21–39. <https://doi.org/10.1108/CR-12-2020-0160>
- Pondrinal, M., & Luthan, E. (2026). ESG Disclosure, Intellectual Capital, and Firm Financial Performance: The Role of Board Gender Diversity as a Moderator. *Jamanika (Jurnal Manajemen Bisnis Dan Kewirausahaan)*, 6(1), 78–95. <https://doi.org/10.22219/jamanika.v6i1.43141>
- Rahman, M., Sa, C. L., & Masud, Md. A. K. (2021). Predicting Firms' Financial Distress: An Empirical Analysis Using the F-Score Model. *Journal of Risk and Financial Management*, 14(5), 199. <https://doi.org/10.3390/jrfm14050199>
- Ridwan, M., & Alghifari, E. S. (2025). Evaluating the impact of ESG on financial risk: The moderating effects of operational ability and profitability in Indonesian infrastructure firms. *Journal of Accounting & Organizational Change*, 21(6), 992–1015. <https://doi.org/10.1108/JAOC-08-2024-0281>
- Rossi, M., Chouaibi, J., Chouaibi, S., Jilani, W., & Chouaibi, Y. (2021). Does a Board Characteristic Moderate the Relationship between CSR Practices and Financial Performance? Evidence from European ESG Firms. *Journal of Risk and Financial Management*, 14(8), 354. <https://doi.org/10.3390/jrfm14080354>
- Sánchez-Almeyda, C. (n.d.). *Predicting financial distress in the food production sector: A dual-model approach using Z-score and O-score methods*.
- Sihotang, D. G., & Siregar, S. V. (2025). The Effect of ESG Performance on Firm Value and Financial Distress with ESG Controversies as A Moderating Variable. *Petra International Journal of Business Studies*, 8(2), 257–270. <https://doi.org/10.9744/petraijbs.8.2.257-270>

- Suseno, G., Putri, E. A., Sari, N., & Meilita, W. (2024). Tobin's Q as a Mediating Variable in the Relationship between Financial Ratios and Stock Prices: An Analysis. *E-Jurnal Akuntansi*, 34(5). <https://doi.org/10.24843/EJA.2024.v34.i05.p01>
- Wang, C. (2024). The Relationship between ESG Performance and Corporate Performance – Based on Stakeholder Theory. *SHS Web of Conferences*, 190, 03022. <https://doi.org/10.1051/shsconf/202419003022>
- Wang, N., Pan, H., Feng, Y., & Du, S. (2024). How do ESG practices create value for businesses? Research review and prospects. *Sustainability Accounting, Management and Policy Journal*, 15(5), 1155–1177. <https://doi.org/10.1108/SAMPJ-12-2021-0515>
- Wu, S., Li, X., Du, X., & Li, Z. (2022). The Impact of ESG Performance on Firm Value: The Moderating Role of Ownership Structure. *Sustainability*, 14(21), 14507. <https://doi.org/10.3390/su142114507>
- Yahaya, O. A. (n.d.-a). *Sustainability Reporting and Firm Value: Evidence from Listed Firms in Nigeria, An Empirical Investigation Using Tobin's Q (2010–2024)*.
- Yahaya, O. A. (n.d.-b). *The Effect of Integrated Reporting Adoption on Firm Value: Evidence from the Nigerian Exchange Group*.